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antigen, comprising: 2 a cell having antibodies which are expressed on the 3 surface of the cell and are specific for the antigen to be 4 detected, wherein binding of the antigen to the antibodies 5 results in an increase in\calcium concentration in the 6 cytosol of the cell, the cell further having an emitter 7 molecule which, in response to the increased calcium 8

1. A device for detecting the presence of an

a liquid medium in which the cell is immersed, the liquid medium receiving the antigen to be detected; and an optical detector arranged for receiving the

- 2. The device of claim 1, further comprising a 1 2 covering for supporting the liquid medium.
- 3. The device of claim 1, wherein the optical 1 detector is a charge-coupled device. 2
- 4. The device  $\delta f$  claim 1, further comprising a housing. 2
- 5. A device for detecting the presence of an 1 antigen, comprising: 2
  - a cell having antibodies which are expressed on the surface of the cell and are specific for the antigen to be detected, wherein binding of the antigen to the antibodies results in an increase in caldium concentration in the cytosol of the cell, the cell further having an emitter molecule which, in response to the increased calcium
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- 9 concentration, emits a photon;

concentration, emits a photen;

photon emitted from the cell.

a liquid medium in which the cell is immersed; and

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- an optical detector arranged for receiving the
  photon emitted from the cells, wherein the optical detector
  is affixed to the liquid medium containing the cells.
  - 6. The device of claim 5, further comprising a covering positioned over the optical detector to support the liquid medium.
  - 7. The device of claim 5, wherein the optical detector is a charge-coupled device.
    - 8. The device of claim 5, further comprising a housing.
    - 9. A device for detecting the presence of two or more antigens, comprising:

an array containing a plurality of sectors, each sector containing a cell having antibodies which are

5 expressed on the surface  $\phi$ f the cell and are specific for

6 the antigen to be detected, wherein binding of the antigen

7 to the antibodies results in an increase in calcium

8 concentration in the cytosol of the cell, the cell further

9 having an emitter molecule which, in response to the

10 increased calcium concentration in the cytosol, emits a

11 photon;

liquid media in which the cell of each sector is

13 immersed; and

an optical detector arranged for receiving the

15 photon emitted from the cell;

wherein each sector contains a cell having

17 antibodies specific to a different antigen.

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- 10. The device of claim 9, further comprising a covering for supporting the liquid medium.
- 1 11. The device of claim 9, wherein the optical detector is a charge-coupled device.
- 1 12. The device of claim 9, further comprising a housing.
- 1 13. A device for detecting the presence of two or 2 more antigens, comprising:

an array containing a plurality of sectors, each sector containing a cell having antibodies which are

5 expressed on the surface  $\phi f$  the cell and are specific for

6 the antigen to be detected wherein binding of the antigen

7 to the antibodies results in an increase in calcium

8 concentration in the cytosol of the cell, the cell further

9 having an emitter molecule which, in response to the

10 increased calcium concentration in the cytosol, emits a

11 photon;

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a liquid medium in which the cell is immersed, the

13 liquid medium receiving the antigen to be detected; and

an optical detector arranged for receiving the

15 photon emitted from the cell;

wherein each sector contains a cell having

17 antibodies specific to a different antigen.

- 14. The device of claim 13, further comprising a covering for supporting the liquid medium.
- 15. The device of claim 13 wherein the optical detector is a charge-coupled device.

- 16. The de√ice of claim 13, further comprising a 1 housing. 2 17. A device for detecting the presence of two or 1 more antigens, comprising: 2 an array containing a plurality of sectors, each 3 sector containing a cell having antibodies which are 4 expressed on the surface of the cell and are specific for 5 the antigen to be detected, wherein binding of the antigen 6 to the antibodies results in an increase in calcium 7 concentration in the cytosol of the cell, the cell further 8 having an emitter molecule which, in response to the 9 increased calcium concentration in the cytosol, emits a 10 photon; 11 a liquid medium in which the cell is immersed; and 12 an optical detector arranged for receiving the 13 photon emitted from the cell, wherein the optical detector 14 is affixed to the liquid medium containing the cells; 15 wherein each sector contains a cell having 16 antibodies specific to a different antigen. 17
  - 18. The device of claim 17 further comprising a covering for supporting the liquid medium.
  - 19. The device of claim 17, wherein the optical detector is a charge-coupled device.
  - 20. The device of claim 17, further comprising a housing.

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volume of air.

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1	21. A method for detecting the presence of an
2	antigen, comprising:
3	providing a sample suspected of containing the
4	antigen;
5	introducing the sample into a device containing a
6	cell immersed in a medium, the cell having antibodies which
7	are expressed on its surface and are specific for the
8	antigen to be detected, wherein binding of the antigen to
9	the antibodies results in an increase in calcium
10	concentration in the cytosol of the cell, and the cell
11	further having an emitter molecule which, in response to the
12	increased calcium concentration, emits a photon; and
13	monitoring photon emission as an indication of
14	whether the antigen is present.
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1	The method of claim 27, wherein the sample is a

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